AMENDMENTS TO THE CLAIMS

Claims 1 - 97 (Canceled).

98. (Currently Amended) A method of forming an image sensor comprising the steps of:

forming a pixel within a substrate;

forming an isolation region adjacent to said pixel; and

forming an isolation gate over said isolation region;

wherein said isolation gate extends beyond said isolation region and over at least a portion of a connection region formed adjacent to said isolation region; and

wherein said isolation gate and said isolation region isolate adjacent pixels.

99. (Original) The method of claim 98 wherein said isolation gate has the same conductivity type as at least one transistor gate of said pixel.

100. (Original) The method of claim 98 wherein a length of said isolation gate is adjusted to minimize cross talk between adjacent pixels.

101. (Currently Amended) The method of claim 98 wherein said isolation region is formed in an active area between adjacent pixels.

102. (Currently Amended) A method of operating an image sensor, said image sensor comprising a pixel, an isolation region adjacent said pixel, and an isolation gate provided over said isolation region and adjacent to said pixel; said method comprising the step of:

forming a separation between a photodiode region of said pixel and said isolation region by applying a voltage to said isolation gate.

103. (Original) The method of claim 102 wherein said method of forming a separation comprises accumulating holes in a connection region between said photodiode region and said insulation region.

104. (Original) The method of claim 102 comprising applying a grounded potential to said isolation gate.

105. (Original) The method of claim 102 comprising applying a negative potential to said isolation gate.

106. (Currently Amended) The method of claim 102 wherein said isolation region is formed in an active area formed between adjacent pixels.

107. (Currently Amended) A method of forming an image sensor comprising:

forming an active layer of a first conductivity type on a substrate;

forming a photosensor in said active layer; and

forming an isolation gate over at least a portion of said active layer ~~adjacent~~ substantially surrounding said photosensor.

108. (Currently Amended) The method of claim 107 ~~wherein~~ further comprising forming an isolation region in said active layer adjacent said photosensor ~~is an isolation region~~.

109. (Original) The method of claim 108 comprising forming said isolation gate over a substantial portion of said isolation region.

110. (Currently Amended) The method of claim [[109]] 107 further comprising forming a length of said isolation gate to minimize cross-talk between adjacent pixels.

111. (Original) The method of claim 107 wherein forming said photosensor further comprises forming a p-n-p junction region in said active layer by forming a photo region of a second conductivity type overlying said active layer of said first conductivity type and forming a surface layer of said first conductivity type overlying said photo region.

112. (Original) The method of claim 107 wherein forming said photosensor comprises forming a photodiode.

113. (Original) The method of claim 107 wherein forming said photosensor comprises forming a photogate.

114. (Original) The method of claim 107 wherein forming said photosensor comprises forming a photoconductor.

115. (Original) The method of claim 107 wherein forming said photosensor comprises forming a p-n-p diode.

116. (Original) The method of claim 107 wherein forming said photosensor comprises forming a buried diode.

117. (Original) The method of claim 107 wherein said image sensor is a CCD sensor.

118. (Original) The method of claim 107 wherein said image sensor is a CMOS image sensor.

119. (Currently Amended) A method of forming a CMOS image sensor comprising:

forming a CMOS image sensor pixel within a substrate; said pixel being formed by:

forming a photosensitive area for accumulating photo-generated charge;

forming a floating diffusion region adjacent one side of said photosensitive area;

forming an output transistor for reading out charge from said floating diffusion region;

forming a read out circuit comprising at least said output transistor;

forming an isolation region around at least a portion of said pixel; and

forming an isolation gate over at least a portion of said isolation region;

wherein the isolation gate substantially surrounds said pixel.

120. (Currently Amended) The method of claim 119 wherein said isolation region is formed in an active area.

121. (Original) The method of claim 120 comprising forming said isolation gate over a substantial portion of said isolation region.

122. (Original) The method of claim 121 further comprising forming a length of said isolation gate to minimize dark current in said image sensor.

123. (Original) The method of claim 119 wherein said output transistor is a transfer gate.

124. (Currently Amended) A method of operating an integrated circuit comprising:

forming a semiconductor substrate;

forming a plurality of image sensor pixels in said substrate;

interconnecting said pixels into a circuit;

forming each of said pixels such that each of said pixels comprises a photosensitive region and a floating diffusion region;

forming an isolation region between adjacent pixels;

forming at least one isolation gate over at least a portion of said isolation region; and

biasing said isolation gate [[to]] with a constant voltage [[; and]].

~~reverse biasing said isolation region by applying said constant voltage.~~

125. (Original) The method of claim 124 further comprising forming a length of said isolation gate to minimize cross-talk between said adjacent pixels.

126. (Currently Amended) The method of claim 124 wherein said isolation region is formed in an active area of said substrate.

127. (New) The method of claim 108 further comprising forming said isolation gate over the entire isolation region.

128. (New) The method of claim 108, wherein said isolation gate extends beyond said isolation region and over at least a portion of a connection region formed adjacent to said isolation region.

129. (New) The method of claim 128, wherein said isolation gate extends beyond over at least a portion of said active layer formed opposite to said connection region.

130. (New) The method of claim 107 further comprising providing electrical isolation between adjacent pixels.

131. (New) The method of claim 107 further comprising biasing said isolation gate to a voltage.

132. (New) A method of forming an image sensor comprising:

forming an active layer of a first conductivity type on a substrate;

forming a photosensor in said active layer;

forming an isolation gate over at least a portion of said active layer adjacent said photosensor; and

biasing said isolation gate with a voltage.

133. (New) The method of claim 130 further comprising forming said isolation gate at the same time forming a transfer gate.

134. (New) The method of claim 130 further comprising forming an isolation region in said active layer adjacent said photosensor.

135. (New) The method of claim 124, wherein said isolation gate reverse biases said isolation region.